## Counting and Cardinality

## Number Sense




## Addition and Subtraction



## Number and Operations in Base Ten - continued

| Multiplication and Division |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Use and explain strategies based on place value and properties of operations | $\begin{gathered} \text { 1.NBT.4, } \\ \text { 1.NBT.5 } \\ \text { 1.NBT.6, } \\ \text { 1.OA.3, 1.OA. } 4 \end{gathered}$ | 2.NBT.5, <br> 2.NBT.6, <br> 2.NBT.7, <br> 2.NBT. 9 | 3.NBT. 2 | 4.NBT.4, 4.NF.3c | 5.NBT. 7 |  |  |  |
| Use odd and even numbers and arrays to gain foundations for multiplication |  | 2.0A.3, 2.0A. 4 | 3.0A.3 |  |  |  |  |  |
| Fluently multiply and divide basic facts |  |  | 3.0А.7 |  |  |  |  |  |
| Compose and decompose numbers |  |  | 3.NBT. 3 | 4.NBT.5, 4.NBT.6, 4.0А. 4 | 5.NBT.5 |  |  |  |
| Use and explain strategies based on the relationship between multiplication and division |  |  | 3.0А.6, 3.0A. 7 | 4.NBT.5, 4.NBT. 6 | $\begin{aligned} & \text { 5.NBT.6, } \\ & \text { 5.NBT. } \end{aligned}$ |  |  |  |
| Use and explain strategies based on place value and properties of operations |  |  | $\begin{gathered} \text { 3.NBT.3, } \\ \text { 3.OA.5, 3.0A.7, } \\ \text { 3.OA. } 9 \end{gathered}$ | 4.NBT.5, 4.NBT. 6 | 5.NBT.6, <br> 5.NBT. 7 |  |  |  |
| Use multiplication to find combinations |  |  | 3.0А. 3 |  |  |  |  |  |
| Interpret multiplication equations as comparisons |  |  |  | 4.0А.1, 4.0А. 2 |  |  |  |  |
| Interpret remainders |  |  |  | $\begin{aligned} & \text { 4.NBT. } 6, \\ & 4.0 \mathrm{O} .3 \end{aligned}$ | 5.NBT.6 |  |  |  |
| Estimation |  |  |  | 4.NBT.3, $\text { 4.NBT. } 6$ | 5.NBT.5, 5.NBT. 6 |  |  |  |
| Divide and fluently multiply multi-digit numbers using standard algorithm |  |  |  | 4.NBT.5, 4.NBT. 6 | $\begin{aligned} & \text { 5.NBT.5, } \\ & \text { 5.NBT. } \end{aligned}$ | 6.NS. 2 |  |  |
| Prime factorization |  |  |  |  | 5.NBT.2 |  |  |  |
| Whole Numbers |  |  |  |  |  |  |  |  |
| Greatest Common Factor (GCF) |  |  |  | 4.NF. 1 | 5.N. 2 | 6.NS. 4 |  |  |
| Least Common Multiple (LCM) |  |  |  | 4.NF. 1 | 5.N. 2 | 6.NS. 4 |  |  |
| Apply Distributive Property |  |  | $\begin{gathered} \text { 3.OA.5, 3.0А. } 7, \\ \text { 3.OA.9, } \\ \text { 3.MD.7c } \end{gathered}$ | 4.NBT. 5 | 5.NBT.5 | 6.NS. 4 | 7.NS.2a |  |
| Powers and exponents |  |  |  |  | 5.NBT.2 | 6.E. 1 |  |  |
| Square roots of perfect squares |  |  |  |  |  |  |  | 8.EE. 2 |
| Cube roots of perfect cubes |  |  |  |  |  |  |  | 8.EE. 2 |
| Integers |  |  |  |  |  |  |  |  |
| Positive and negative numbers |  |  |  |  |  | 6.NS. 5 |  |  |
| Opposite signs of numbers |  |  |  |  |  | 6.NS.6a |  |  |
| Graph integers on a number line |  |  |  |  |  | 6.NS.6, 6.NS.6a, 6.NS.6c |  |  |
| Graph integers on a coordinate plane |  |  |  |  |  | $\begin{gathered} \text { 6.NS. } 6, \\ \text { 6.NS.6b, } \\ \text { 6.NS. } 6 \mathrm{cc}, 6 . \mathrm{NS} .8 \end{gathered}$ |  |  |
| Order integers |  |  |  |  |  | 6.NS.7, 6.NS.7a, 6.NS.7b, 6.NS.7d |  |  |


| Concept/Skill | Grade K | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Course 1 | Course 2 | Course 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number and Operations in Base Ten - continued |  |  |  |  |  |  |  |  |  |
| Integers continued |  |  |  |  |  |  |  |  |  |
| Absolute value |  |  |  |  |  |  | $\begin{aligned} & \text { 6.NS.7, } \\ & \text { 6.NS.7c, } \\ & \text { 6.NS.7d } \end{aligned}$ | 7.NS.1c |  |
| Additive inverses |  |  |  |  |  |  |  | $\begin{aligned} & \text { 7.NS.1a, } \\ & \text { 7.NS.1b } \end{aligned}$ |  |
| Multiplication of integers |  |  |  |  |  |  |  | 7.Ns.2a |  |
| Division of integers |  |  |  |  |  |  |  | 7.Ns.2b |  |
| Properties of integer exponents |  |  |  |  |  |  |  |  | 8.EE. 1 |
| Rational Numbers |  |  |  |  |  |  |  |  |  |
| Graph rational numbers on a number line |  |  |  |  |  |  | $\begin{aligned} & \text { 6.NS.6, } \\ & \text { 6.NS.6a } \end{aligned}$ |  |  |
| Order rational numbers on a number line |  |  |  |  |  |  | $\begin{aligned} & \text { 6.NS.7, } \\ & \text { 6.NS.7a } \end{aligned}$ |  |  |
| Write, interpret, and explain order of rational numbers |  |  |  |  |  |  | 6.NS.7b |  |  |
| Graph rational numbers on a coordinate plane |  |  |  |  |  |  | $\begin{gathered} \text { 6.NS.6, } \\ \text { 6.NS.6c, 6.NS. } 8 \\ \hline \end{gathered}$ |  |  |
| Solve real-world problems by graphing points in all four quadrants |  |  |  |  |  |  | 6.NS. 8 |  |  |
| Add and subtract rational numbers |  |  |  |  |  |  |  | $\begin{aligned} & \text { 7.NS.1, } \\ & \text { 7.NS.1b, } \\ & \text { 7.NS.1c, } \\ & \text { 7.NS.1d } \end{aligned}$ |  |
| Represent addition and subtraction on a number line |  |  |  |  |  |  |  | $\begin{aligned} & \text { 7.NS.1, } \\ & \text { 7.NS.1b } \end{aligned}$ |  |
| Interpret sums of rational numbers in real-world contexts |  |  |  |  |  |  |  | 7.NS.1b |  |
| Understand subtraction as adding the additive inverse |  |  |  |  |  |  |  | 7.NS.1c |  |
| Interpret products and quotients of rational numbers in real-world contexts |  |  |  |  |  |  |  | $\begin{aligned} & \text { 7.NS.2a, } \\ & \text { 7.NS.2b } \end{aligned}$ |  |
| Distance between two rational numbers on a number line |  |  |  |  |  |  |  | 7.NS.1c |  |
| Multiply and divide rational numbers |  |  |  |  |  |  |  | $\begin{aligned} & \text { 7.NS.2, } \\ & \text { 7.NS.2a, } \\ & \text { 7.NS.2b, } \\ & \text { 7.NS.2c } \end{aligned}$ |  |
| Concept of rational numbers |  |  |  |  |  |  |  | 7.Ns.2b |  |
| Convert rational numbers to decimals |  |  |  |  |  |  |  | 7.NS.2d |  |
| Terminating and repeating decimals |  |  |  |  |  |  |  | 7.Ns.2d | 8.NS. 1 |
| Solve real-world problems using operations with rational numbers |  |  |  |  |  |  |  | 7.NS. 3 |  |
| Complex fractions |  |  |  |  |  |  |  | 7.RP.1, 7.NS. 3 |  |
| Solve multi-step problems involving rational numbers |  |  |  |  |  |  |  | 7.EE. 3 |  |
| Convert a decimal expansion which repeats eventually into a rational number |  |  |  |  |  |  |  |  | 8.NS. 1 |

## Number and Operations in Base Ten - continued

Real Numbers

| Concept of irrational numbers |  |  |  |  |  |  |  |  | 8.NS. 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Estimate square roots |  |  |  |  |  |  |  |  | 8.NS. 2 |
| Know $\sqrt{ } 2$ is irrational |  |  |  |  |  |  |  |  | 8.EE. 2 |
| Compare the size of irrational numbers |  |  |  |  |  |  |  |  | 8.NS. 2 |
| Approximate location of irrational numbers on a number line |  |  |  |  |  |  |  |  | 8.NS. 2 |


| Number and Operations |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fractions |  |  |  |  |  |  |  |  |
| Partition shapes and understand fractions as part of a whole | 1.G. 3 | 2.G. 3 | 3.NF.1, 3.G.2 |  |  |  |  |  |
| Express fractions as a whole number |  |  | 3.NF.3C |  |  |  |  |  |
| Represent fractions on a number line |  |  | $\begin{aligned} & \text { 3.NF.2, } \\ & \text { 3.NF.2a, } \\ & \text { 3.NF.2b, } \\ & \text { 3NF.3a } \end{aligned}$ | 4.NF. 6 | 5.NF. 2 | 6.NS.6c | 7.NS. 1 |  |
| Equivalent fractions |  |  | 3.NE.3a, 3.N.3b, 3.NF.3C | 4.NF.1, 4.N. 5 | 5.NF. 1 |  |  |  |
| Unit fractions |  |  | 3.NF.1, 3.G.2 | 4.N.3b, 4.NF.4a, 4.NF.4b | 5.NF. 7 |  |  |  |
| Compare and order fractions |  |  | 3.NF.3d | 4.NF. 2 | 5.NF.5a |  |  |  |
| Find factor pairs and multiples |  |  |  | 4.0А.4 | 5.NBT.2 |  |  |  |
| Prime and composite numbers |  |  |  | 4.OA. 4 | 5.NBT.2 |  |  |  |
| Simplest form |  |  |  | 4.NF.1, 4.NF. 2 | 5.NF.5b |  |  |  |
| Represent mixed numbers and write as improper fractions |  |  |  | 4.NF.3b | 5.NF. 1 |  |  |  |
| Add, subtract, and multiply fractions and mixed numbers |  |  |  | 4.NF.3C, <br> 4.NF.3d, 4.NF. 4 | $\begin{aligned} & \text { 5.N.N.1, 5.N.N.2, } \\ & \text { 5.N.4, 5.N.5, } \\ & \text { 5.NF.6 } \end{aligned}$ |  |  |  |
| Solve word problems involving addition and subtraction of fractions |  |  |  | 4.NF.3d | 5.NF. 2 |  |  |  |
| Solve word problems involving multiplication of fractions |  |  |  | 4.NF.4c | 5.NF. 6 |  |  |  |
| Round fractions |  |  |  |  | 5.NF. 2 |  |  |  |
| Estimate sums and differences of fractions |  |  |  |  | 5.NF. 2 |  |  |  |
| Estimate products of fractions |  |  |  |  | 5.NF.4a, 5.NF.6 |  |  |  |
| Interpret multiplication with fractions as scaling |  |  |  |  | 5.NF. 5 |  |  |  |
| Interpret fractions as division of numerator by denominator |  |  |  |  | 5.NF.3 |  |  |  |
| Divide fractions and mixed numbers |  |  |  |  | 5.NF. 7 | 6.NS. 1 | 7.NS.2c |  |
| Solve word problems involving division of fractions |  |  |  |  | 5.NF.7c | 6.NS. 1 | $\begin{aligned} & \text { 7.NS.2c } \\ & \text { 7.NS. } 3 \\ & \text { 7.EE. } 3 \\ & \hline \end{aligned}$ |  |

## Number and Operations - continued



Ratios and Proportional Relationships

## Ratios and Rates

| Understand the concept of a ratio |  |  |  |  |  |  | 6.RP. 1 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Use ratio and rate language |  |  |  |  |  |  | 6.RP.1, 6.RP. 2 |  |  |
| Understand the concept of a unit rate |  |  |  |  |  |  | 6.RP. 2 |  |  |
| Solve real-world problems using ratios and rates |  |  |  |  |  |  | 6.RP. 3 | 7.RP. 3 |  |
| Tables of equivalent ratios |  |  |  |  |  |  | 6.R.3a | 7.R.2.2a |  |
| Graph ratio tables |  |  |  |  |  |  | 6.RP.3a | 7.RP.2a |  |
| Unit pricing |  |  |  |  |  |  | 6.RP.3b |  |  |

## Ratios and Proportional Relationships - continued

| Ratios and Proportional Relationships - continued |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ratios and Rates continued |  |  |  |  |  |  |  |  |
| Constant speed |  |  |  |  |  | 6.RP.3b |  |  |
| Use ratios to convert measurements |  |  |  |  |  | 6.RP.3d | 7.RP. 3 |  |
| Unit rates involving fractions (complex fractions) |  |  |  |  |  |  | 7.R.P. 1 |  |
| Ratio and probability |  |  |  |  |  |  | 7.SP.8a |  |
| Interpret unit rate as the slope |  |  |  |  |  |  |  | 8.EE. 5 |
| Rate of change of a linear function |  |  |  |  |  |  |  | 8.F.4 |
| Proportional Relationships |  |  |  |  |  |  |  |  |
| Recognize and represent proportional relationships |  |  |  |  |  |  | 7.RP. 2 |  |
| Identify proportional relationships using tables or graphs |  |  |  |  |  |  | 7.RP.2a |  |
| Constant of proportionality (unit rate) |  |  |  |  |  |  | $\begin{aligned} & \text { 7.RP.2b, } \\ & \text { 7.RP.2d } \end{aligned}$ |  |
| Represent proportional relationships by equations |  |  |  |  |  |  | 7.RP.2¢ |  |
| Explain what a point on the graph of a proportional relationship means |  |  |  |  |  |  | 7.RP.2d |  |
| Solve proportions |  |  |  |  |  |  | 7.RP. 3 |  |
| Use proportional relationships to solve multi-step ratio problems |  |  |  |  |  |  | 7.R. 3 |  |
| Graph proportional relationships |  |  |  |  |  |  | 7.RP.2a | 8.EE. 5 |
| Compare two different proportional relationships |  |  |  |  |  |  |  | 8.EE. 5 |
| Scale drawings |  |  |  |  |  |  | 7.6. 1 |  |



## Algebra and Functions - continued

Algebraic Representation continued

| Determine if addition or subtraction equations are true or false. | 1.0A. 7 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Solve word problems that call for addition of three numbers | 1.0A.2 |  |  |  |  |  |  |  |
| Order of operations |  |  | 3.0А. 8 | 4.0A.3 | 5.0A. 1 | 6.EE.2c |  |  |
| Write and solve multiplication and division word problems |  |  | 3.0A.3, 3.0A. 8 | $\begin{gathered} \text { 4.OA.2, 4.OA.3, } \\ \text { 4.NF.4c, } \\ \text { 4.MD.2, } \\ \text { 4.MD.3 } \end{gathered}$ | 5.NBT.5, 5.NF.6, 5.NF.7c |  |  |  |
| Write and evaluate expressions involving variables |  |  | 3.0A.5, 3.0A. 8 | 4.0A.3 | 5.0A.1, 5.0A. 2 | 6.E..2, 6.EE.2a, 6.EE.2c, 6.EE. 6 |  |  |
| Identify and generate non-numeric patterns |  |  |  | 4.0A. 5 |  |  |  |  |
| Apply properties of operations | $\begin{aligned} & \text { 1.0A.3, } \\ & \text { 1.NBT. } 2 \end{aligned}$ | $\begin{aligned} & \text { 2.NBT.5, } \\ & \text { 2.NBT.6, } \\ & \text { 2.NBT.7, } \\ & \text { 2.NBT.9 } \end{aligned}$ | $\begin{gathered} \text { 3.NBT.3, } \\ \text { 3.0A.5, 3.0A. } 7, \\ \text { 3.OA. } \end{gathered}$ | $\begin{aligned} & \text { 4.OA.5, } \\ & \text { 4.NBT.5 } \end{aligned}$ | 5.NBT. 5 | 6.EE. 3 | 7.EE.1,7.EE. 2 |  |
| Parts of an expression |  |  |  |  |  | 6.EE.2b |  |  |
| Identify equivalent expressions |  |  |  |  |  | 6.EE. 4 |  |  |
| Properties of integer exponents |  |  |  |  |  |  |  | 8.EE. 1 |
| Use scientific notation to estimate quantities |  |  |  |  |  |  |  | 8.EE. 3 |
| Perform operations using scientific notation |  |  |  |  |  |  |  | 8.EE. 4 |
| Choose units of appropriate size for very large or very small quantities |  |  |  |  |  |  |  | 8.EE. 4 |
| Scientific notation and technology |  |  |  |  |  |  |  | 8.EE. 4 |

Equations and Inequalities

| Identify values that make an equation or inequality true |  |  |  |  |  |  | 6.EE. 5 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Use variables and expressions to solve real-world problems |  |  |  |  |  |  | 6.EE. 6 | 7.EE. 4 |  |
| Write and solve equations of the form $\mathrm{x}+\mathrm{p}=\mathrm{q}$ and $\mathrm{px}=\mathrm{q}$ |  |  |  |  |  |  | 6.EE. 7 |  |  |
| Inequalities of the form $\mathrm{x}>\mathrm{c}$ or $\mathrm{x}<\mathrm{c}$ |  |  |  |  |  |  | 6.E. 8 |  |  |
| Graph inequalities on a number line |  |  |  |  |  |  | 6.EE. 8 | 7.EE.4b |  |
| Solve equations of the form $\mathrm{px}+\mathrm{q}=\mathrm{r}$ and $p(x+q)=r$ |  |  |  |  |  |  |  | 7.EE.4, 7.E..4a |  |
| Compare an algebraic solution to an arithmetic solution |  |  |  |  |  |  |  | 7.EE.4a |  |
| Solve multi-step problems involving rational numbers |  |  |  |  |  |  |  | 7.EE. 3 | 8.EE.7.8 |
| Solve inequalities of the form $\mathrm{px}+\mathrm{q}<$ $r$ or $p x+q<r$ |  |  |  |  |  |  |  | 7.EE.4,7.E.4b |  |
| Solve linear equations with one, infinitely many, or no solutions |  |  |  |  |  |  |  |  | 8.EE.7, 8.EE.7a |
| Solve linear equations with rational coefficients |  |  |  |  |  |  |  | 7.EE.4a | 8.EE.7, 8.EE.7b |

## Algebra and Functions - continued

## Equations and Inequalities continued

$\left.\begin{array}{|l|l|l|l|l|l|l|l|l|l}\text { Solve equations of the form } x^{2}=p \text { and } & & & & & & & & & \text { 8.E.22 } \\ x^{3}=p\end{array}\right)$

## Equations in Two Variables

| Dependent and independent variables |  |  |  |  |  |  | 6.EE. 9 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Write equations using two variables |  |  |  |  |  |  | 6.EE. 9 |  |  |
| Form ordered pairs |  |  |  |  |  | $\begin{aligned} & \text { 5.OA.3, 5.G.1, } \\ & \text { 5.G. } \end{aligned}$ |  |  |  |
| Tables of ordered pairs |  |  |  |  |  | $\begin{aligned} & \text { 5.OA.3.5.5.1, } \\ & \text { 5.G.2 } \end{aligned}$ | 6.EE. 9 |  |  |
| Graphs of ordered pairs |  |  |  |  |  | $\begin{aligned} & \text { 5.OA.3, 5.G.1, } \\ & \text { 5.G.2 } \end{aligned}$ | 6.EE. 9 |  |  |
| Analyze patterns and relationships |  |  |  |  |  | $\begin{aligned} & \text { 5.OA.3, } \\ & \text { 5.NBT.2 } \end{aligned}$ | 6.EE. 9 |  |  |
| Represent proportional relationships by equations |  |  |  |  |  |  |  | 7.RP.2c |  |
| Use similar triangles to explain slope of a line |  |  |  |  |  |  |  |  | 8.EE. 6 |
| Derive the equations $\mathrm{y}=\mathrm{mx}$ and $\mathrm{y}=$ $m x+b$ |  |  |  |  |  |  |  |  | 8.EE. 6 |
| Solve systems of linear equations by graphing |  |  |  |  |  |  |  |  | 8.EE.8, 8.EE.8a |
| Solve systems of linear equations algebraically |  |  |  |  |  |  |  |  | 8.EE.8, 8.EE.8b |
| Solve problems leading to two linear equations in two variables |  |  |  |  |  |  |  |  | 8.EE.8, 8.EE.8c |



## Measurement

## Measurement

Describe and compare measurable

## Measurement - continued

## Linear Measurement

| Linear Measurement |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Measure and order by comparing indirectly and by iterating using nonstandard units of length | 1MD.1, 1MD. 2 |  |  |  |  |  |  |
| Measure length using appropriate tools |  | 2.MD. 1 |  |  |  |  |  |
| Use customary units of length to estimate, measure, and compare |  | $\begin{aligned} & \text { 2.MD.1, } \\ & \text { 2.MD.2, } \\ & \text { 2.MD.3, } \\ & \text { 2.MD. } \end{aligned}$ |  |  |  |  |  |
| Use addition and subtraction to solve word problems of length |  | 2.MD.5, |  | $\begin{aligned} & \text { 4.MD.2, } \\ & \text { 4.MD.3, } \\ & \text { 4.MD.4 } \end{aligned}$ | $\begin{aligned} & \text { 5.MD.1, } \\ & \text { 5.MD.2 } \end{aligned}$ |  |  |
| Measure to half and quarter of an inch |  |  | 3.MD. 4 | 4.MD. 2 | 5.MD. 2 |  |  |
| Measure to eighth of an inch |  |  |  | 4.MD. 2 | 5.MD. 2 |  |  |
| Estimate using customary and metric units of length |  |  |  | $\begin{aligned} & \text { 4.MD.1, } \\ & \text { 4.MD.2 } \end{aligned}$ |  |  |  |
| Measure metric units of length |  |  |  | 4.MD. 1 | 5.MD. 1 |  |  |
| Know measurement equivalencies within a measurement system |  |  |  | 4.MD. 1 | 5.MD. 1 |  |  |
| Convert customary and metric units of length |  |  |  | $\begin{aligned} & \text { 4.MD.1, } \\ & \text { 4.MD.2 } \end{aligned}$ | 5.MD. 1 |  |  |



## Liquid Volume

| Estimate metric units of capacity |  |  |  | $3 . M D .2$ | $4 . M D .1$, | $5 . M D .1$ |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Measure metric units of capacity |  |  |  |  | $3 . M D .2$ |  | $5 . M D .1$ |  |  |  |

Grade K Grade 1 Grade 2 Grade 3 Grade 4 Grade 5 Course 1 Course 2 Course 3


## Statistics and Probablity

## Data Sets and Populations

Classify objects by size, shape, and count

## Statistics and Probablity - continued

| Organize, represent, and interpret data | 1.MD. 4 | $\begin{aligned} & \text { 2.MD.9, } \\ & \text { 2.MD. } 10 \end{aligned}$ | $\begin{aligned} & \text { 3.MD.3, } \\ & \text { 3.MD.4 } \end{aligned}$ | 4.MD. 4 | 5.MD. 2 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Generate data in whole units of linear measurement |  | 2.MD. 9 |  |  |  |  |  |
| Generate data in fractions of an inch |  |  | 3.MD. 4 | 4.MD. 4 | 5.MD. 2 |  |  |
| Recognize statistical questions |  |  |  |  |  | 6.SP. 1 |  |
| Distribution of a set of data |  |  |  |  |  | 6.SP. 2 |  |
| Statistics and population samples |  |  |  |  |  |  | 7.SP. 1 |
| Random sampling of populations |  |  |  |  |  |  | 7.SP. 1 |
| Draw inferences from random samples |  |  |  |  |  |  | 7.SP. 2 |
| Multiple samples of data |  |  |  |  |  |  | 7.SP. 2 |
| Visual overlap of data distributions |  |  |  |  |  |  | 7.SP. 3 |
| Comparative inferences between two populations |  |  |  |  |  |  | 7.SP. 4 |

## Measures of Center and Variability

| Measures of center |  |  |  |  |  |  | 6.SP. 3 | 7.SP.3,7.SP. 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Median |  |  |  |  |  |  | 6.SP.5c |  |
| Mean |  |  |  |  |  |  | 6.SP.5C |  |
| Measures of variation |  |  |  |  |  |  | 6.SP. 3 | 7.SP.3,7.SP. 4 |
| Range |  |  |  |  |  |  | 6.SP.2, 6.SP. 3 |  |
| Outliers |  |  |  |  |  |  | 6.SP.5c |  |
| Mean absolute deviation |  |  |  |  |  |  | 6.SP.5c |  |
| Shape of the data distribution |  |  |  |  |  |  | 6.SP.5d |  |
| Summarize and describe numerical data sets |  |  |  |  |  |  | $\begin{aligned} & \text { 6.SP.5, 6.SP.5a, } \\ & \text { 6.SP.5b, 6.SP.5c } \end{aligned}$ |  |

## Represent Data, Statistical Displays

| Draw scaled picture graphs and scaled bar graphs |  |  |  | 3.MD3 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Solve problems involving bar graph analysis |  |  | 2.MD. 10 | 3.MD. 3 |  |  |  |  |  |
| Make line plots using generated linear measurement data |  |  | 2.MD. 9 | 3.MD. 4 | 4.MD. 4 | 5.MD. 2 |  |  |  |
| Solve addition and subtraction of fractions problems involving line plot analysis |  |  |  |  | 4.MD. 4 | 5.MD. 2 |  |  |  |
| Solve multiplication and division of fractions problems involving line plot analysis |  |  |  |  |  | 5.MD. 2 |  |  |  |
| Dot plots |  |  |  |  |  |  | 6.SP. 4 | 7.SP.3,7.SP. 4 |  |
| Histograms |  |  |  |  |  |  | 6.SP. 4 |  |  |
| Box plots |  |  |  |  |  |  | 6.SP. 4 | 7.SP. 4 |  |
| Scatter plots |  |  |  |  |  |  |  |  | 8.SP. 1 |
| Clustering and outliers |  |  |  |  |  |  |  |  | 8.SP. 1 |
| Positive and negative association |  |  |  |  |  |  |  |  | 8.SP. 1 |

## Statistics and Probablity - continued

## Represent Data, Statistical Displays continued

| Linear and nonlinear association |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Line of best fit |  |  |  |  |  |  |  |  |  |
| Use the equation of a linear model to <br> solve problems |  |  |  |  |  |  |  |  |  |
| Two-way tables |  |  |  |  |  |  |  | 8 |  |

Probability

| Probability and chance events |  |  |  |  |  |  |  | 7.SP. 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Likely and unlikely events |  |  |  |  |  |  |  | 7.SP. 5 |
| Relative frequency |  |  |  |  |  |  |  | 7.SP. 6 |
| Develop a probability model |  |  |  |  |  |  |  | $\begin{aligned} & \text { 7.SP.7,7.S.P.7a, } \\ & \text { 7.S.P.7b } \end{aligned}$ |
| Compare theoretical and experimental probability |  |  |  |  |  |  |  | 7.SP. 7 |
| Compound events |  |  |  |  |  |  |  | 7.SP.8, 7.SP.8a |
| Sample spaces |  |  |  |  |  |  |  | 7.SP.8,7.5P.8b |
| Number of outcomes |  |  |  |  |  |  |  | 7.SP.8a |
| Permutations |  |  |  |  |  |  |  | 7.SP.8a |
| Simulations |  |  |  |  |  |  |  | $\begin{aligned} & \text { 7.SP.6, 7.SP.7, } \\ & \text { 7.SP.8, 7.SP.8c } \end{aligned}$ |
| Fair and unfair games |  |  |  |  |  |  |  | 7.SP.7b |

## Geometry

Two- and Three-Dimensional Shapes and Figures


## Geometry - continued

Two- and Three-Dimensional Shapes and Figures continued


